

Sally Perreault Darney

Education

- B.A., Newton College, Newton, MA; Biology, 1968.
- M.A.T., Brown University, Providence, RI; Biomedical Sciences, 1969.
- Ph.D., University of Hawaii, Honolulu, HI; Reproductive Biology, 1980.

Professional Experience

- 1984-present: Research Biologist, EPA.
- 1986-present: Supervisory Research Biologist, RTD, NHEERL, EPA.

Research Interests

- Toxicant-induced impairment of gamete production/function and its impact on fertility, early pregnancy loss and risk assessment.
- Fertilization: Regulation of molecular events associated with reactivation of the sperm nucleus.
- Disinfection byproducts in test species.

Professional Activities

- Adjunct Faculty: Department of Animal Science, College of Agriculture and Life Sciences, North Carolina State University Raleigh, NC; Department of Molecular Biomedical Science, School of Veterinary Medicine, North Carolina State University, Raleigh, NC.
- Editorial Boards: Journal of Andrology, Molecular Reproduction and Development, Biology of Reproduction, Reproductive Toxicology, Journal of Toxicology and Environmental Health, Part B.
- Editor-in-Chief, Journal of Andrology. 2007-2012.
- Associate Editor, Journal of Toxicology and Environmental Health, Part B. 2001-present.
- Associate Editor, Biology of Reproduction. 2005-2007.
- President, American Society of Andrology, 2006. Vice president, 2004. Program Chair, 2003.
- Member, Reproductive Biology Study Section, National Institutes of Health, Center for Scientific Review. 2003.
- Member, Cellular, Molecular and Integrative Reproduction Study Section, National Institutes of Health. 2006.
- Member, National Occupational Research Agenda Committee on Fertility and Pregnancy Abnormalities, National Institute for Occupational Safety and Health. 1998-2006.

- Participant, Center for the Evaluation of Risks to Human Reproduction Expert Panel on acrylamide, National Institute of Environmental Health Sciences. 2004.
- Participant, College of Reviewers, The Canada Research Chairs Program, Government of Canada. 2001-2003.
- Participant, Canadian Institute of Health Research special study section "Healthy Gametes and Great Embryos". 2002.
- Member, Endocrine Disruptors Working Group, EPA, Interagency Coordinating Committee on the Validation of Alternative Methods, National Institute of Environmental Health Sciences/National Toxicology Program Center for the Evaluation of Alternative Toxicological Methods. 2001-present.
- Program Chair, 23rd Annual Meeting, American Society of Andrology. 2003.
- Member, Organizing Committee, University of California at San Francisco/Collaborative on Health and the Environment Summit on Reproductive Health. 2006.
- Member, Scientific Program Committee, International Congress of Toxicology, IX Meeting. 2007.
- Member, Program Committee, Society of Toxicology Annual Meetings. 2007-2009.
- Member, National Children's Study: Workgroup on Fertility and Early Pregnancy; EPA, National Institute of Child Health and Human Development, National Institute for Environmental Health Sciences, and Centers for Disease Control and Prevention. 2001-2004.
- Member, Multiyear Plan Committee, EPA, Office of Research and Development Goal 4 (Safe Pesticides/Safe Products). 2000-2005.
- Member, National Health and Environmental Research Goal 4 Multiyear Plan Implementation Team, EPA. 2003-present.
- Reviewer, EPA: Acrylamide and Perchlorate Risk Assessments (National Center for Environmental Assessment), n-Bromopropane Probable Effects Level (Office of Mobile Sources), and Cyanide Risk Assessment (Office of Water).

Invited Lectures/Symposia

- Postgraduate Course on The Environment and Reproductive Health, Pacific Coast Reproductive Society, Indian Wells, CA: Adult exposures that may alter the reproductive axis in both males and females. 2006.
- Department of Pharmacology and Therapeutics, McGill University, Montreal, Canada: Novel approaches for conducting environmental epidemiology studies on male reproductive health. 2006.
- School of Health Systems and Public Health, University of Pretoria, Pretoria, South Africa: Assessing the impact of environmental exposures on male reproductive health. 2005.
- Department of Genetics and Reproduction, Veterinary Research Institute, Brno, Czech Republic: Strategies for evaluating environmental effects on male reproductive health: Animal models and human studies. 2005.
- Office of Research and Development, Office of Pollution Prevention and Toxic Substances Seminar Series, EPA, Washington, DC: Utility of sperm measures in reproductive toxicology: Of mice (or rats) and men. 2004.
- Canadian Institutes of Health Research Workshop on Reproductive and Developmental Toxicology Research, Montreal, Quebec, Canada: US/Global perspective: Research needs and potential interactions. 2004.

- Society of Toxicology of Canada, Annual Symposium, Montreal, Quebec, Canada: Mechanisms of male reproductive toxicity: Bed, bath, and beyond. 2004.
- President's Symposium on Reproduction and the Environment, Society for the Study of Reproduction Annual Meeting, Cincinnati, OH: Tracking down reproductive health risks for humans exposed to environmental contaminants. 2003.
- Environmental Toxicology Program Seminar Series, University of California, Riverside, CA: Use of new biomarkers of sperm integrity to examine the potential impact of air and water pollution on male reproductive health. 2003.
- International Workshop on Advances in Human Research, Exposure and Risk Assessment related to Reproductive and Developmental Effects, Academy of Sciences of the Czech Republic and the European Network on Children's Susceptibility and Exposure to Environmental Genotoxins of the European Commission, Prague, Czech Republic: Exposure to intermittent air pollution and changes in semen quality: Evidence for an association and implications for reproductive risk assessment. 2003.
- Program in Molecular Toxicology, University of California at Los Angeles, Los Angeles, CA: Impact of air pollution on human semen quality including sperm chromatin structure and sperm aneuploidy. 2002.
- Department of Anatomy and Cell Biology, Georgetown University School of Medicine, Washington, DC: Do environmental contaminants pose a risk to reproductive health? An overview of EPA's Reproductive Toxicology Program and a closer look at gamete toxicity. 2002.
- Department of Pathology and Laboratory Medicine, Brown University, Providence, RI: Assessing reproductive health risks in men through the use of novel biomarkers of sperm integrity. 2002.

Selected Publications

Rubes J, Selevan SG, Sram RJ, Evenson DP, Perreault SD. 2007. GSTM1 genotype influences the susceptibility of men to sperm DNA damage associated with exposure to air pollution. *Mutat Res.* 625:20-8 [Abstract](#)

Luben TJ, Olshan AF, Herring AH, Jeffay SC, Strader LF, Buus RM, Chan RL, Savitz DA, Singer PC, Weinberg HS, Perreault SD. 2007. The healthy men study: An evaluation of exposure to disinfection by-products in tap water and sperm quality. *Environ Health Perspect.* 115:1169-76. [Abstract](#)

Wyrobek AJ, Mulvihill JJ, Wassom JS, Mallin HV, Shelby MD, Lewis SE, Witt KL, Preston RJ, Perreault SD, Allen JW, Demarini DM, Woychik RP, Bishop JB. 2007. Assessing human germ-cell mutagenesis in the postgenome era: A celebration of the legacy of William Lawson (Bill) Russell. *Environ Mol Mutagen.* 48:71-95. [Abstract](#)

Perreault SD, Klinefelter GR, Clegg ED. 2007. Assessment of male reproductive toxicity. In: *Principles and Methods of Toxicology*. Ed.: A.W. Hayes, Taylor & Francis, Philadelphia, PA.

Olshan AF, Perreault SD, Bradley L, Buus RM, Strader LF, Jeffay SC, Lansdell L, Savitz DA, Herring A. 2007. The healthy men study: Design and recruitment considerations for environmental epidemiologic studies in male reproductive health. *Fertil Steril*. 87:554-64. [Abstract](#) Rubes J, Selevan SG, Sram RJ, Evenson DP, Perreault SD. 2007. GSTM1 genotype influences the susceptibility of men to sperm DNA damage associated with exposure to air pollution. *Mutat Res*. 625:20-8 [Abstract](#)

Lawson CC, Grajewski B, Daston GP, Frazier L, Lynch D, McDiarmid M, Muroso E, Perreault SD, Robbins W, Shelby M, Whelan EA. 2006. Workgroup Report: Implementing a national occupational reproductive research agenda: Decade one and beyond. *Environ Health Perspect*. 114:435-41. [Abstract](#)

Manson J, Brabec MJ, Buelke-Sam J, Carlson GP, Chapin RE, Favor JB, Fischer LJ, Hattis D, Lees PS, Perreault SD, Rutledge J, Smith TJ, Tice RR, Working P. 2005. NTP-CEHHR expert panel report on the reproductive and developmental toxicity of acrylamide. *Birth Defects Res B Dev Reprod Toxicol*. 74:17-113. [Abstract](#)

Rubes J, Vozdova M, Oracova E, Perreault SD. 2005. Individual variation in the frequency of sperm aneuploidy in humans. *Cytogenet Genome Res*. 111:229-36. [Abstract](#)

Stoker TE, Perreault SD, Bremser K, Marshall RS, Murr AS, Cooper RL. 2005. Acute exposure to molinate alters neuroendocrine control of ovulation in the rat. *Toxicol Sci*. 84:38-48. [Abstract](#)

Boekelheide K, Perreault SD, Daston GP, David RM, Luderer U, Olshan AF, Sanderson WT, Willhite CC, Woskie S. 2004. NTP-CEHR expert panel report on the reproductive and developmental toxicity of 1-bromopropane. *Reprod Toxicol*. 18:157-188. [Abstract](#)

Boekelheide K, Perreault SD, Daston GP, David RM, Luderer U, Olshan AF, Sanderson WT, Willhite CC, Woskie S. 2004. NTP-CERHR expert panel report on the reproductive and developmental toxicity of 2-bromopropane. *Reprod Toxicol*. 18:189-217. [Abstract](#)

Miki K, Qu W, Goulding EH, Willis WD, Bunch DO, Strader LF, Perreault SD, Eddy EM, O'Brien DA. 2004. Glyceraldehyde 3-phosphate dehydrogenase-s, a sperm-specific glycolytic enzyme, is required for sperm motility and male fertility. *Proc Natl Acad Sci USA*. 101:16501-6. [Abstract](#)

Rockett JC, Buck GM, Lynch CD, Perreault SD. 2004. The value of home-based collection of biospecimens in reproductive epidemiology. *Environ Health Perspect*. 112:94-104. [Abstract](#)

Young KE, Robbins WA, Xun L, Elashoff D, Rothmann SA, Perreault SD. 2003. Evaluation of chromosome breakage and DNA integrity in sperm: An investigation of remote semen collection conditions. *J Androl*. 24:853-61. [Abstract](#)

Perreault SD, Aitken RJ, Baker HW, Evenson DP, Huszar G, Irvine DS, Morris ID, Morris RA, Robbins WA, Sakkas D, Spano M, Wyrobek AJ. 2003. Integrating new tests of sperm genetic integrity into semen analysis: Breakout group discussion. *Adv Exp Med Biol.* 518:253-68. [Abstract](#)

Perreault SD. 2003. Distinguishing between fertilization failure and early pregnancy loss when identifying male-mediated adverse pregnancy outcomes. *Adv Exp Med Biol.* 518:189-98. [Abstract](#)

Lawson CC, Schnorr TM, Daston GP, Grajewski B, Marcus M, McDiarmid M, Murono E, Perreault SD, Schrader SM, Shelby M. 2003. An occupational reproductive research agenda for the third millennium. *Environ Health Perspect.* 111:584-92. [Abstract](#)

Stoker TE, Jeffay SC, Zucker RM, Cooper RL, Perreault SD. 2003. Abnormal fertilization is responsible for reduced fecundity following thiram-induced ovulatory delay in the rat. *Biol Reprod.* 68:2142-9. [Abstract](#)

Zuelke KA, Jeffay SC, Zucker RM, Perreault SD. 2003. Glutathione (GSH) concentrations vary with the cell cycle in maturing hamster oocytes, zygotes, and pre-implantation stage embryos. *Mol Reprod Dev.* 64:106-12. [Abstract](#)

Rubes J, Vozdova M, Robbins WA, Rezacova O, Perreault SD, Wyrobek AJ. 2002. Stable variants of sperm aneuploidy among healthy men show associations between germinal and somatic aneuploidy. *Am J Hum Genet.* 70:1507-19. [Abstract](#)

Ong TD, Xun L, Perreault SD, Robbins WA. 2002. Aneuploidy and chromosome breakage in swim-up versus unprocessed semen from twenty healthy men. *J Androl.* 23:270-7. [Abstract](#)

Klinefelter GR, Welch JE, Perreault SD, Moore HD, Zucker RM, Suarez JD, Roberts NL, Bobseine K, Jeffay S. 2002. Localization of the sperm protein SP-22 and inhibition of fertility *in vivo* and *in vitro*. *J Androl.* 23:48-63. [Abstract](#)

Perreault SD. 2002. Smart use of computer-aided sperm analysis (CASA) to characterize sperm motion. In: *The Epididymis: From Molecules to Clinical Practice--A Comprehensive Survey of the Efferent Ducts, the Epididymis and the Vas Deferens*, Chapter 27. Eds.: B. Robaire, B.H Hinton, Springer, New York, NY.